

CLAIMS

1. Tube (1) fitted with a head (10) intended to fix capping (20) according to any of claims 10 to 17, and with a cylindrical or prismatic skirt (2) having an orthogonal section of any shape whose largest inscribed circle has a diameter D , characterized in that the head is provided with a circular cylindrical wall (11) extending towards the inside of the tube, surrounding an opening (15) concentric to said inscribed circle and having a diameter typically lying between $0.5 \cdot D$ and $0.9 \cdot D$, and in that it essentially occupies the inner volume of the end of skirt (2) over a distance of less than D , preferably less than $D/3$.

2. Tube (1) according to claim 1 fitted with a head (10) intended to fix capping (20) according to claim 12, in which the head is also provided with a peripheral wall (12) which extends the skirt (2) of the flexible tube over a short distance, typically in the order of one millimetre, and is slightly recessed inwards over a distance corresponding to the thickness of the peripheral skirt (24) of the capping (20).

3. Tube (1) according to claim 2 fitted with a head (10) intended to fix a service-cap (20) according to claim 13, in which said peripheral wall (12) is provided with cavities (121) intended to receive housings (204) of extension parts (203) of the hinge (202 and 203).

4. Tube according to claim 2 or 3, characterized in that the orthogonal section of the skirt (2) is not a circle centred over the axis of the large-diameter-opening (15), so that the capping (20) is also locked in rotation when it reaches its end position.

5. Tube according to any of claims 1 to 4, in which the head (10) is fitted with an end wall comprising bosses (13) entering

the inner volume of the end of the skirt (2), each boss (13) having a bottom wall (14) whose slope is inclined relative to the plane that is perpendicular to the axis of the opening.

5 6. Tube according to any of claims 1 to 5, in which said bosses (13) have a side wall (16) whose shape is deduced by staggering the shape of the skirt (2) and of the circular cylindrical wall (11) surrounding the large-diameter-opening (15), the stagger distance being less than $D/10$.

10 7. Tube according to any of claims 1 to 6, in which the lower part of the head (10) is fitted with a jutting part (17) oriented towards the inside of the tube.

8. Tube according to claim 7, in which the jutting part (17) is a positioning peg attached to a net (19) stretched between arms (18, 18a) crossing over the large-diameter-opening (15).

15 9. Tube according to any of claims 5 to 8, in which the section of the skirt (2) is an ellipse, the diameter of the large-diameter-opening (15) lies between 0.5 and 0.9 times the short axis of the ellipse, and in which the bosses (13) occupy the complementary parts of the ellipse formed by two zones
20 extending around the long axis of the ellipse and have a side wall (16) deduced by inner displacement of the elliptic skirt (2) over a distance in the order of one millimetre and outer displacement of the circular cylindrical wall (11) surrounding the large-diameter-opening (15).

25 10. Capping (20), in particular a service-cap (20), able to be fixed in substantially irreversible manner to the head of the tube, according to any of claims 1 to 9, characterized in that it comprises a base (21) whose outer contour follows the shape of the orthogonal section of the skirt of said tube and is fitted
30 with a large-diameter-skirt (22) whose diameter typically lies

between $0.5 \cdot D$ and $0.9 \cdot D$, D being the diameter of the largest circle inscribed in the outer contour of said base, said large-diameter-skirt having a height less than D , preferably less than $D/3$ and being provided with substantially irreversible fixing means (23) to fix the capping (20, 200) to the head (10) of tube (1).

11. Capping according to claim 10, in which the large-diameter-skirt (22) has a cylindrical part whose diameter is equal to or slightly greater than the diameter of the large-diameter-opening (15) of the tube head and has an open end fitted with a click-fit rim (23) whose outer surface is of blunt cone shape (27).

12. Capping according to claim 10 or 11, in which the base (21) is fitted with a peripheral skirt intended to be inserted around the edge of the tube head according to any of claims 2 to 9.

13. Service-cap according to any of claims 10 to 12 comprising a base (21) and a cap end (201) pivoting around a hinge (202 and 203), said hinge comprising at least one extension part (203), in which the attachment of the extension part on the base is fixed in a housing (204) arranged in the lower part of the peripheral skirt (24).

14. Capping according to any of claims 10 to 13 in which the large-diameter-skirt is provided with ease notches (26).

15. Capping according to claim 14, in which the ease notches (26) are firstly cavities of trapezoid shape widening towards the base which facilitate the proper positioning of the large-diameter-skirt (22) on the arms (18, 18a) crossing over the large-diameter-opening (15) of the tube head according to claims

8 and 9, and secondly are cavities which facilitate product flow towards the large-diameter-opening.

16. Service cap according to any of claims 10 to 15 in which the peripheral contour of the base is an ellipse and in which the diameter of the large-diameter-skirt lies between 0.5 and 0.9 times the short axis of said ellipse.

17. Dispenser tube intended to store and dispense liquid products of varying viscosity in the form of gels, creams or pastes, characterized in that it is obtained by assembling the flexible tube according to any of claims 1 to 9 with the capping according to any of claims 10 to 16.